

Serial No. 10/657,169

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. *(Currently amended)* A method ~~[[for]]~~ of manufacturing a piston for a swash plate type compressor with variable capacity, said method being performed on comprising the step of (A) forming the a first piston member ~~[[((23))]]~~ having a bridge ~~[[((21))]]~~ and ~~[[the]]~~ a first coupling part ~~[[((22))]]~~ extending from the bridge ~~[[((21))]]~~ and a ~~(B)~~ forming the second piston member ~~[[((26))]]~~ having ~~[[the]]~~ a second coupling part ~~[[((24))]]~~ adapted to be coupled with the first coupling part ~~[[((22))]]~~ and ~~[[the]]~~ a hollow part, said method comprising the following steps that are performed in the recited sequence: (25) formed by coupling the first piston member (23) and the second piston member (26) with each other;

~~[[((C))]]~~ rotatably supporting the first and second piston members on (23 and 26) to the first and second supporting parts (31a and 31b) after coupling while the first and second piston members are coupled together (23 and 26) temporarily;

~~[[((D))]]~~ friction stir welding the first and second piston members together using friction heat generated by friction contact while rotating the first supporting support part (31a) is rotated at a predetermined speed after a welder welding means (40) is rotatably advanced downwardly and inserted into welded portions to a welding portion of the first and second piston members;

~~[[((E))]]~~ moving the welder from welding means (40) inserted to the welded portion portions to [[the]] a predetermined position while maintaining contact between the welder and the first piston member after finishing the friction stir welding of the welding portion; and

~~[[((F))]]~~ separating the welder welding means (40) from the first piston member at said predetermined position welded portion.

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2. *(Currently amended)* A method ~~[[for]]~~ of manufacturing a piston for a swash plate type compressor with variable capacity, said method being performed on comprising: the step of (A) forming the a first piston member ~~[[((23)]]~~ having a bridge ~~[[((21)]]~~ and ~~[[the]]~~ a first coupling part ~~[[((22)]]~~ extending from the bridge ~~[[((21);]]~~ and a ~~(B) forming the second piston member~~ ~~[[((26)]]~~ having ~~[[the]]~~ a second coupling part ~~[[((24)]]~~ adapted to be coupled with the first coupling part ~~[[((22)]]~~ and ~~[[the]]~~ a hollow part, said method comprising the steps of: (25) formed by coupling the first piston member (23) and the second piston member (26) with each other;

~~[[C)]]~~ aligning a position controlling of the central ~~[[axis]]~~ axial line of the first and second piston members(23 and 26) to with that of ~~[[the]]~~ first and second supporting parts ~~(31a and 31b)~~ after temporarily coupling the first and second piston members ~~(23 and 26)~~ and supporting the first and second piston members ~~(23 and 26)~~ on ~~[[the]]~~ support rollers ~~(33)~~ installed elastically supported by a elastic spring;

~~[[D)]]~~ supporting the first and second piston members(23 and 26) to on the first and second supporting parts(31a and 31b) after the position controlling step;

~~[[E)]]~~ friction stir welding the first and second piston members together using friction heat generated by friction contact while rotating the first supporting support part (31a) is rotated at a predetermined speed after a welder welding means(40) is rotatably advanced downwardly and inserted into welded portions to a welding portion of the first and second piston members;

~~[[F)]]~~ moving the welder welding means(40) inserted to the welded portion to ~~[[the]]~~ a predetermined position after finishing the friction stir welding ~~of the welding portion;~~ and

~~[[G)]]~~ separating the welder welding means(40) from the welded portion portions.

3. *(Currently amended)* ~~[[A]]~~ The method for manufacturing a piston according to claim 1, wherein the friction stir welding is finished by a single revolution of done by one-time rotation of the first and second piston members(23 and 26) using the first supporting part ~~[[31b)]]~~.

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4. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, wherein the friction stir welding is finished by a single revolution of done by one-time rotation of the first and second piston members(23 and 26) using the first supporting part~~ ~~[[31b]]~~.

5. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 1, wherein the step of moving~~ ~~[[of]] the welder welding means(40) is carried out by moving a table (36) within the a predetermined distance in the axial direction of the piston~~ ~~[[20]]~~.

6. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, wherein the step of moving~~ ~~[[of]] the welder welding means(40) is carried out by moving a table (36) within the a predetermined distance in the axial direction of the piston~~ ~~[[20]]~~.

7. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 1, wherein, in the moving step, the welder welding means(40) is moved to the bridge (21) portion of the first piston member~~ ~~[[23]]~~ from the welded portions portion(29) by the movement of the moving a table ~~[[36]]~~.

8. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, wherein, in the moving step, the welder welding means(40) is moved to the bridge (21) portion of the first piston member~~ ~~[[23]]~~ from the welded portions portion(29) by the movement of the moving a table ~~[[36]]~~.

9. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, wherein the support rollers~~ ~~[[33]]~~ are raised lifted or lowered by an ascent and descent member ~~[[53]]~~ which is connected to the lower side of a supporting member ~~[[34]]~~ supporting

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the ~~[[both]]~~ support rollers~~[[33]]~~ and is elastically supported by the elastic spring~~[[52]]~~.

10. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, wherein the aligning step is performed position controlling of the central axis line of the first and second piston members(23 and 26) to that of the first and second supporting parts(31a and 31b) is done in a state wherein~~ ~~[[which]]~~ the upper surface of the second piston member~~[[26]]~~ elastically supported by the support rollers~~[[33]]~~ is pressurized by a position controlling guide member~~[[60]]~~ installed at the upper side of the second supporting part~~[[31b]]~~.

11. *(Currently amended)* ~~[[A]] The method for manufacturing a piston according to claim 2, after the supporting step of the first and second piston members(23 and 26), further comprising~~ ~~[[a]] the step of fixing~~ ~~[[the]]~~ an ascent and descent member~~[[53]]~~ by moving ~~[[the]]~~ a fixing element means(70) driven by a driving element means(77) to the lower side of the ascent and descent member~~[[53]]~~ and contacting ~~having~~ the upper surface of the fixing element means(70) ~~contacted~~ with the lower side of the ascent and descent member~~[[53]]~~ to fix the lower portion of the ascent and descent member, ~~[[53]]~~ which is elastically supported installed by the elastic spring, ~~[[52]]~~ under the support rollers~~[[33]]~~.

12. *(new)* The method according to claim 1, wherein no residual hole is formed by the welder on the welded portions of the first and second piston members.